Log Book:

Science Fair Logbook

Project Title: The Dirty Truth: What's the Grossest Thing in My House?
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Planning & Research – November 2025

Nov 7: Started project; discussed ideas; chose to study bacteria on household items; picked slide template.

Nov 8: Finalized title; wrote introduction about bacteria and germs in homes.

Nov 9: Labeled slides for background, variables, procedure, data, results.

Nov 10: Researched bacteria, how they grow, and why agar is used in Petri dishes; took notes.

Background Research:

Bacteria are tiny living things that can grow on moist surfaces.

Agar in Petri dishes helps bacteria grow.

Household items like sponges, keyboards, and light switches can have a lot of bacteria because they are touched often.

Nov 11: Finished background research; added information about household germs.

Nov 12: Identified controlled, independent, and dependent variables.

Independent variable:
The household surface we tested (TV remote, door handle, kitchen sponge, toilet seat, etc.)

Dependent variable:
The Number of bacterial colonies (CFU) after 5 days.

Controlled variable:
Amount of time allowed for bacterial growth, incubation temperature, swabbing method, type of growth medium, incubation time, type of cotton swabs, size and type of petri dishes, number of trials per surface, observation method,
Nov 13: Wrote step-by-step experiment procedure.

Nov 14: Reviewed variables.

Nov 15: Edited procedure; added safety steps and instructions for multiple trials.

Nov 16: Organized slides; ready to do the experiment.

Supply Delay – Nov 17 to Dec 22, 2025

Ordered Petri dishes and agar, but the supplies kept delaying because of harsh weather conditions. Learned that ordering materials early gives more time for observations.

Question / Purpose

Purpose: To find out which household item has the most bacteria.

Question: Which household item grows the most bacteria in 5 days? Experiment

December 2025

Dec 23 (Day 1): Collected samples with cotton swabs; placed in labeled Petri dishes; did 3 trials.

Dec 24 (Day 2): Observed dishes; very little growth visible.

Dec 25 (Day 3): Noticed clear bacterial colonies, especially on sponges; took photos.

Dec 26 (Day 4): Developed counting method; counted colonies; recorded data.

Dec 27 (Day 5): Final observation; sponges had lots of bacteria and some mold; completed data table.

After the experiment:

Dec 28: Transferred data to slides; checked for accuracy.

Dec 30: Minor growth on light switch; no major changes.

Dec 31: Wrote results and analysis; sponges had the most bacteria, followed by Keyboard, then other items.

Finalizing our project – January 2026

Jan 1: Re-counted colonies to check accuracy.

Jan 2: Completed data tables and labels.

Jan 3: Made graphs showing bacterial growth.

Jan 4: Edited and added experiment video to slides.

Jan 5: Wrote conclusion; sponges had highest bacteria; hypothesis was supported.

Jan 6: Listed possible errors and limitations.

Jan 7: Added acknowledgements and references.

Jan 8: Reviewed slides; corrected spelling, grammar, and formatting.

Jan 9: Final check; project complete and ready for submission.